



# RE Integration into Sectoral Plans & Case Study – PROSOL



## United Nations Environment Programme

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**Within our Energy branch programme, UNEP helps to:**



- Overcome market barriers
- Increase investment flows to renewable energy and energy efficiency technologies



# Strengths of UNEP's Strategy

- UNEP climate initiatives employ **a variety of approaches and tools:**
  - Institutional support from local governments
  - **Multi-stakeholder approach** (government, banks, end-users, suppliers, installers, state utility)
  - Technical support for setting up dedicated loan instrument
  - Targeted capacity building, training, communication and dissemination for specific niche markets
- **Integrating carbon reduction benefits**

# Applications of UNEP's strategy :



## *PROSOL: A Success Story in Tunisia*

Supported by the Italian Ministry of  
Environment, Lands and Sea





# Initial Situation

*Why isn't solar energy used for water heating in sunny Tunisia?*

## Favourable conditions

- ✓ High solar resource
- ✓ Strong institutions
- ✓ National priority:  
Energy conservation

## Challenges

- ✗ Capital intensive, no financing
- ✗ Current option (LPG) heavily subsidised

## UNEP Strategy

1. Help banks to begin financing Solar Water Heaters
2. Address perverse subsidy

## Goal

- ✓ Develop sustainable SWH market; displace LPG use.
- ✓ Improve energy security and reduce CO<sub>2</sub>





# Main features of the Programme

## 1. Loans financed through local banks

- repayments made through electricity bills
- interest rates initially softened
- interest subsidy phased out after 18 months

## 2. Subsidy equalized between SWH and LPG

- underwritten for a trial period by UNEP
  - 20% of system cost = 75\$/m<sup>2</sup> = **existing gas subsidy**
- After successful trial made permanent
  - Change in Tunisian legislation



# Repayment through Utility Bill

## Affordable Financing for END-USER

- A loan mechanism over a **5-year term**
- 10% down payment
- Repayment of the loan via the STEG utility bill
- Monthly payment = Energy savings

## A **QUICK** and **SIMPLIFIED** Procedure

- Customer contacts the SWH supplier
- Customer fills out the application form at the **SWH supplier office**, presents his latest STEG bill and ID
- The installation is **immediate** once the application form and engagement form are signed



# Discounted Interest Rates

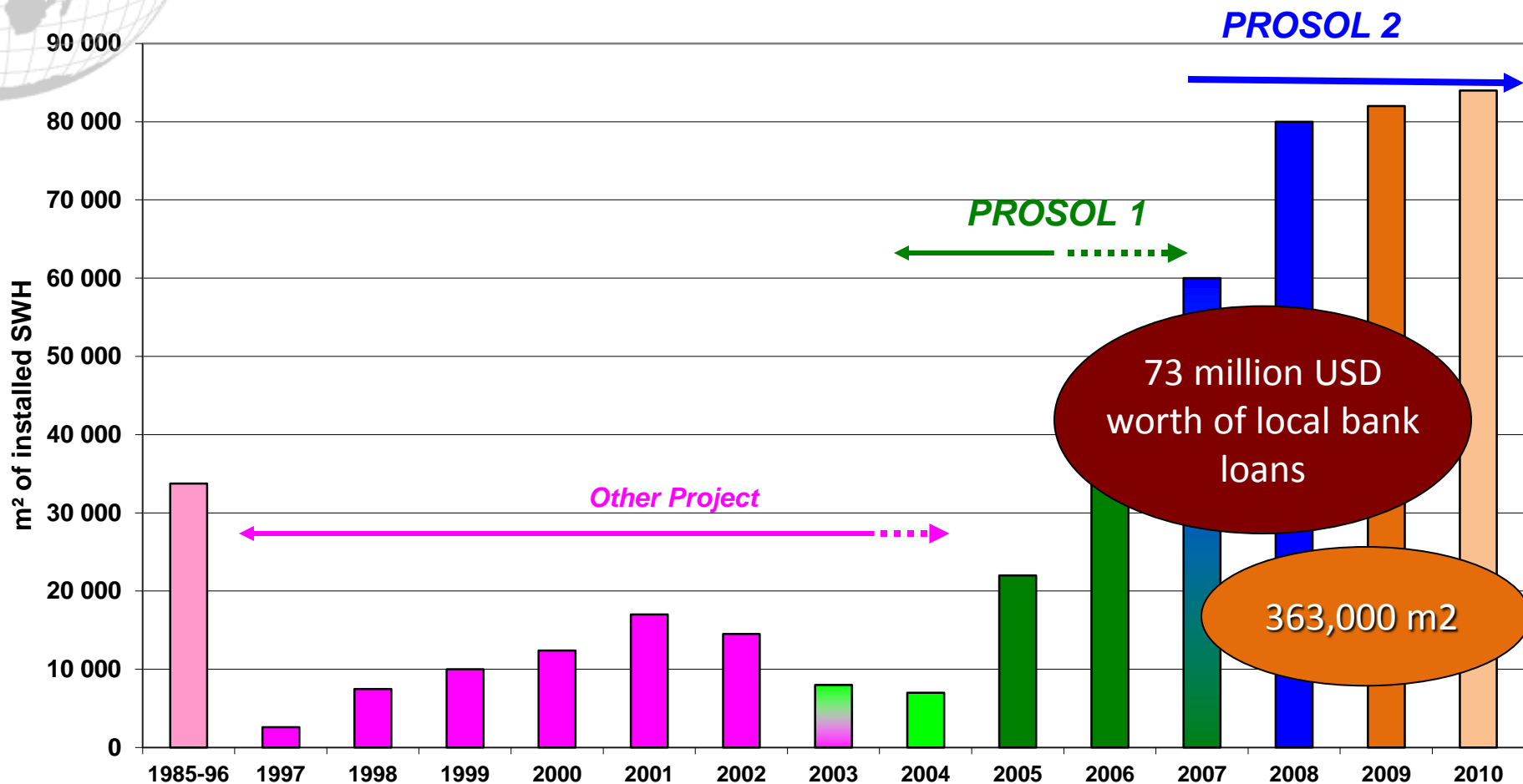
- **Initial** average bank consumer loans: 12 – 13%
- With STEG's involvement, banks provide loans to the end users by lowering the interest rates by 5-6% because the **risk of nonpayment** is **low**
- UNEP further softened interest rates down to **0%**, full benefit passed on to the customer.



# PROSOL Results

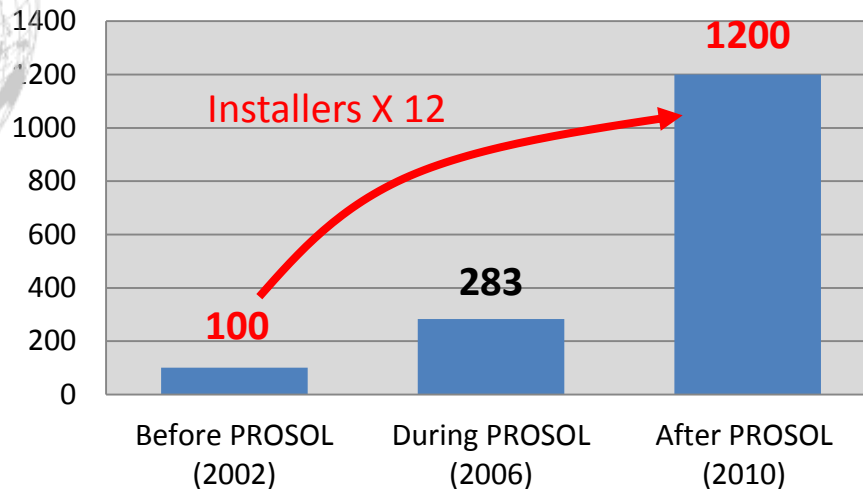


## Solar Water Heaters Market Growth in Tunisia 1985-2010

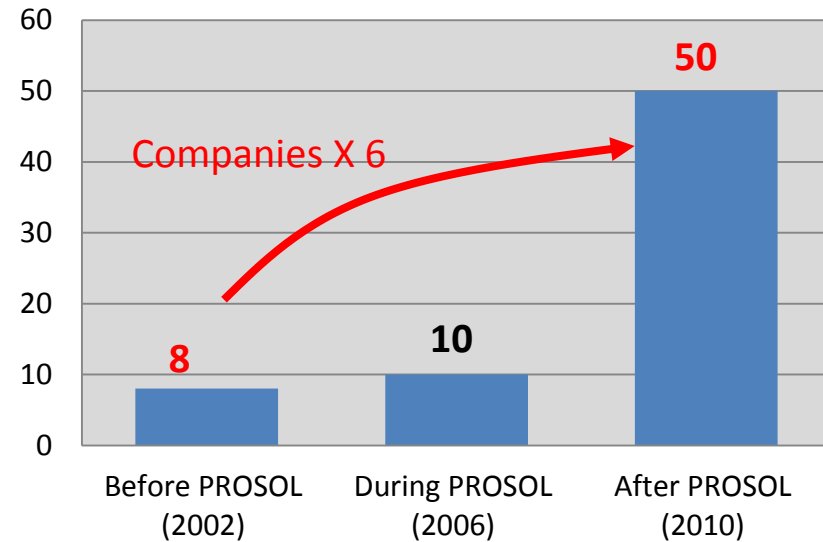


# PROSOL Results: Social & Economic Impacts

Number of qualified installers



Number of sale companies



- ✓ More than **3500** direct jobs were created
- ✓ A turnover of 176 million DTN ( 120 million \$) with an increase of 28% per year



# Key success factors in PROSOL

- Tailored integrated approach targeting residential houses
- Involvement of the Energy State Utility (STEG) offered security to banks
- A comprehensive communication and awareness raising campaign
- UNEP interest rate buy-down
- CDM component



# End-User Finance Programmes



NATIONS  
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## Tunisian PROSOL Programme

- End-user Consumer Finance
- Domestic Solar Water Heating Systems
- As end of 2010, 363,000 m<sup>2</sup> installed
- Banks provided \$73 million worth of loans
- Consumer Loan repayment via the electricity bill

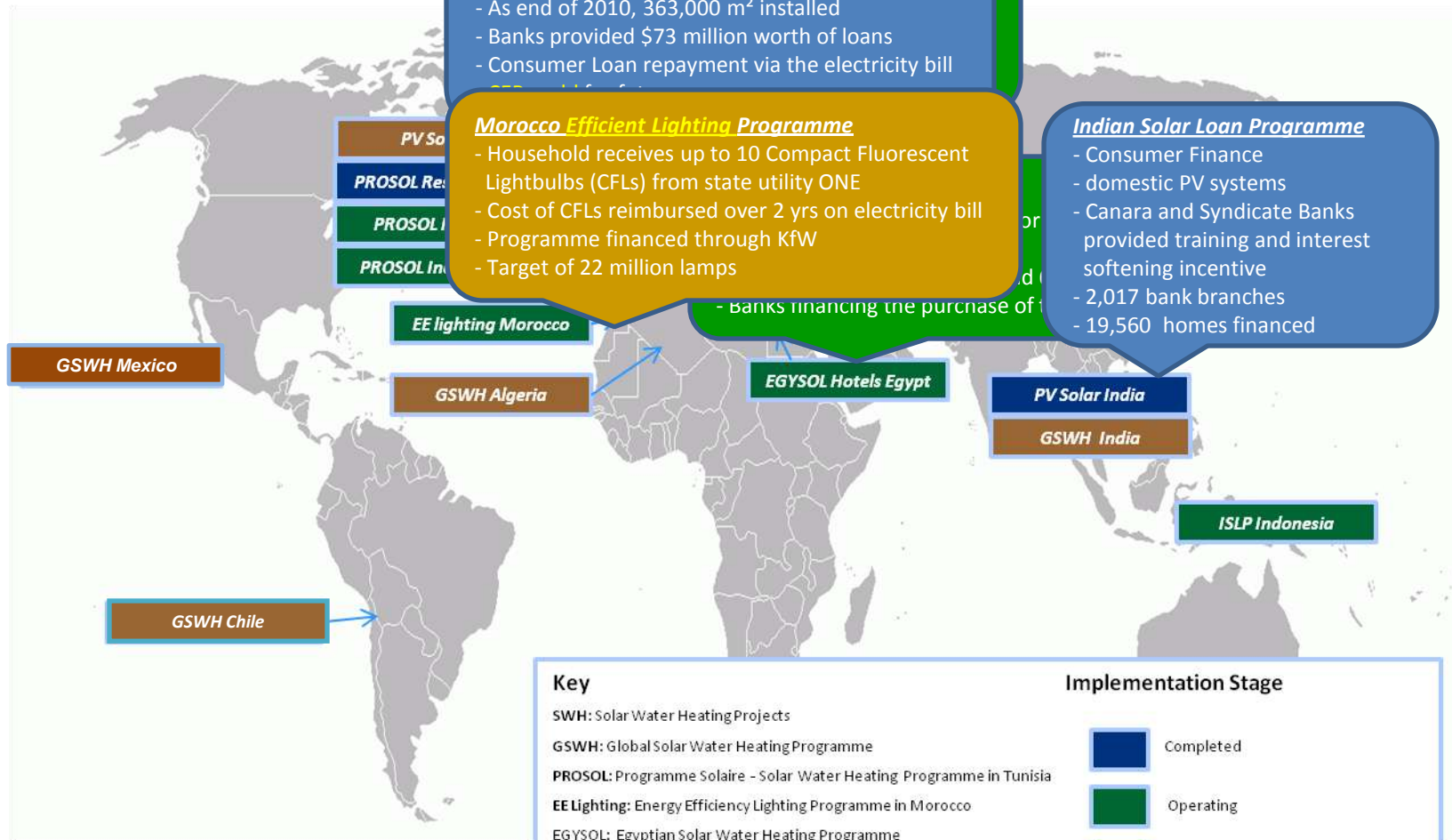
## Morocco Efficient Lighting Programme

- Household receives up to 10 Compact Fluorescent Lightbulbs (CFLs) from state utility ONE
- Cost of CFLs reimbursed over 2 yrs on electricity bill
- Programme financed through KfW
- Target of 22 million lamps

## Indian Solar Loan Programme

- Consumer Finance
- domestic PV systems
- Canara and Syndicate Banks provided training and interest softening incentive
- 2,017 bank branches
- 19,560 homes financed

- Banks financing the purchase of





# Thank You

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